THE JOURNAL OF
Pathology

2006 Volume 209
JPTLAS 209 (1–4) 1–558 (2006)
ISSN 0022–3417

The Journal of The Pathological Society – '*Understanding disease*'

Editor-in-Chief
Professor C Simon Herrington: Bute Medical School, Bute Medical Buildings, University of St Andrews, St Andrews, Fife KY16 9TS, UK

Associate Editors
Professor Andrew M Hanby: Academic Unit of Pathology, St James's University Hospital, Beckett Street, Leeds LS9 7TF, UK

Professor Pancras CW Hogendoorn: Department of Pathology, Leiden University Medical Centre, L-1-Q PO Box 9600, The Netherlands, 2300 RC

Professor C James Kirkpatrick: Institute of Pathology, Johannes Gutenberg University of Mainz, Langenbeckstrasse 1, 55101 Mainz, Germany

Professor Graeme I Murray: Department of Pathology, University of Aberdeen, University Medical Buildings, Foresterhill, Aberdeen AB25 2ZD, UK

Professor Richard Poulsom: Histopathology Unit, Cancer Research UK–London Research Institute, 44 Lincoln's Inn Fields, London WC2A 3PX, UK

Professor Rosemary A Walker: Department of Pathology, University of Leicester, Clinical Sciences Building, PO Box 65, Leicester Royal Infirmary, Leicester LE2 7LX, UK

Reviews Editor
Professor Fred T Bosman: University Institute of Pathology, Rue du Bugnon 25, 1011 Lausanne, Switzerland

Advisory Board
Professor AD Burt
Newcastle, UK

Professor CDM Fletcher
Boston, USA

Professor PA Hall
Belfast, UK

Professor KJ Hillan
San Francisco, USA

Professor PG Isaacson
London, UK

Professor JR Jass
Montreal, Canada

Professor G Kloppel
Kiel, Germany

Professor DA Levison
Dundee, UK

Professor CJLM Meijer
Amsterdam, The Netherlands

Professor M Pignatelli
Bristol, UK

Professor M Sobrinho-Simoes
Porto, Portugal

Professor H Stein
Berlin, Germany

Professor PG Toner
Cheltenham, UK

Professor DH Wright
Winchester, UK

Professor NA Wright
London, UK

Professor AH Wyllie
Cambridge, UK

Professor RM Zinkernagel
Zürich, Switzerland

Editorial Board
Professor M Alison
London, UK

Dr MJ Arends
Cambridge, UK

Professor P Bedossa
Paris, France

Dr L Cheng
Indianapolis, USA

Dr PJ Coates
Dundee, UK

Professor C Cuvelier
Ghent, Belgium

Professor MJAP Daemen
Maastricht, The Netherlands

Dr DC Douek
Bethesda, USA

Professor MQ Du
Cambridge, UK

Professor S Fleming
Dundee, UK

Professor AJ Freemont
Manchester, UK

Professor P Furness
Leicester, UK

Dr J Going
Glasgow, UK

Dr P Harnden
Leeds, UK

Professor F Hofstädter
Regensburg, Germany

Professor M Ilyas
Nottingham, UK

Professor SR Lakhani
Brisbane, Australia

Professor JE Martin
London, UK

Professor U Moll
Stony Brook, USA

Professor G Niedobitek
Erlangen, Germany

Dr K Oien
Glasgow, UK

Dr Y Osamura
Kanagawa, Japan

Professor ST Pals
Amsterdam, The Netherlands

Professor MG Papotti
Turin, Italy

Dr D Rimm
Yale, USA

Dr SEH Russell
Belfast, Northern Ireland

Professor W Timens
Groningen, The Netherlands

Professor KF To
Hong Kong

Professor IPM Tomlinson
London, UK

Professor P Waring
San Francisco, USA

Aims and Scope
The main interests of *The Journal of Pathology* lie in the pathophysiological and pathogenetic mechanisms of human disease and in the application of such knowledge to diagnosis and prognosis. In determining content, the primary considerations are excellence, relevance and novelty.

The Journal welcomes investigative studies on human tissues, experimental studies *in vitro* and *in vivo*, and investigations based on animal models with a clear relevance to human disease, including transgenic systems. Methodological improvements in investigative and diagnostic pathology are also of interest. Correlative studies of pathological data and clinical outcomes are considered but purely descriptive papers on diagnostic pathology are not central to the Journal's purpose. In general, studies that appropriately employ multiple investigative techniques are preferred over those that rely on a single methodology. Illustrations must be of the highest quality to be acceptable for publication. As well as original research papers, the Journal seeks to provide rapid publication in a variety of other formats, including editorials, review articles and other features, both contributed and solicited. Papers covering significant developments in teaching methods and in the practice of pathology may be acceptable if they are of international scope and relevance. Correspondence from readers will be published if it is of general interest.

In summary, the Journal aims to serve as a bridge between basic biomedical science and clinical medicine with particular emphasis on morphologically based studies. As the journal of The Pathological Society, it seeks to reflect the broad scientific interests of the Society's membership but its ethos, authorship, content and purpose are those expected of a leading publication in the international scientific literature.

Volume 209, Number 1 May 2006

Commentaries

What can we learn from the oral intake of prions by sheep? N Salès 1

Original Papers

Transportation of prion protein across the intestinal mucosa of scrapie-susceptible and scrapie-resistant sheep M Jeffrey, L González, A Espenes, C McL Press, S Martin, M Chaplin, L Davis, T Landsverk, C MacAldowie, S Eaton and G McGovern 4

Differential expression of *HOX* genes in neoplastic and non-neoplastic human astrocytes R Abdel-Fattah, A Xiao, D Bomgardner, C-S Pease, M-BS Lopes and IM Hussaini 15

New evidence for the origin of intracranial germ cell tumours from primordial germ cells: expression of pluripotency and cell differentiation markers CE Hoei-Hansen, A Sehested, M Juhler, Y-FC Lau, N Skakkebaek, H Laursen and E Rajpert-De Meyts 25

Expression and localization of VEGF-C and VEGFR-3 in glioblastomas and haemangioblastomas B Jenny, JA Harrison, D Baetens, J-C Tille, K Burkhardt, H Mottaz, JZ Kiss, P-Y Dietrich, N De Tribolet, GP Pizzolato and MS Pepper 34

Plasma cell tumor progression in iMyc$^{E\mu}$ gene-insertion mice JS Kim, SS Han, SS Park, N McNeil and S Janz 44

IRTA1$^+$ monocytoid B cells in reactive lymphadenitis show a unique topographic distribution and immunophenotype and a peculiar usage and mutational pattern of *IgV_H* genes S Lazzi, C Bellan, E Tiacci, N Palummo, R Vatti, M Oggioni, T Amato, K Schuerfeld, T Tonini, P Tosi, B Falini and L Leoncini 56

Lymphatic endothelium-specific hyaluronan receptor LYVE-1 is expressed by stabilin-1$^+$, F4/80$^+$, CD11b$^+$ macrophages in malignant tumours and wound healing tissue *in vivo* and in bone marrow cultures *in vitro*: implications for the assessment of lymphangiogenesis K Schledzewski, M Falkowski, G Moldenhauer, P Metharom, J Kzhyshkowska, R Ganss, A Demory, B Falkowska-Hansen, H Kurzen, S Ugurel, G Geginat, B Arnold and S Goerdt 67

Comparison of the immunophenotypes of signet-ring cell carcinoma, solid adenocarcinoma with mucin production, and mucinous bronchioloalveolar carcinoma of the lung characterized by the presence of cytoplasmic mucin K Tsuta, G Ishii, J Nitadori, Y Murata, T Kodama, K Nagai and A Ochiai 78

Expression of Lewis antigens and their precursors in gastric mucosa: relationship with *Helicobacter pylori* infection and gastric carcinogenesis HS Lee, G Choe, WH Kim, HH Kim, J Song and KU Park 88

Close localization of DAP-kinase positive tumour-associated macrophages and apoptotic colorectal cancer cells R Schneider-Stock, D Kuester, O Ullrich, F Mittag, C Habold, C Boltze, B Peters, S Krueger, C Hintze, F Meyer, R Hartig and A Roessner 95

Cyclin D3 expression in primary Ta/T1 bladder cancer A Lopez-Beltran, MJ Requena, RJ Luque, J Alvarez-Kindelan, A Quintero, AM Blanca, ME Rodriguez, E Siendones and R Montironi 106

Bone stromal cells in pagetic bone and Paget's sarcoma express RANKL and support human osteoclast formation SG Sun, YS Lau, I Itonaga, A Sabokbar and N A Athanasou 114

Adoptive transfer of regulatory NKT lymphocytes ameliorates non-alcoholic steatohepatitis and glucose intolerance in ob/ob mice and is associated with intrahepatic CD8 trapping E Elinav, O Pappo, M Sklair-Levy, M Margalit, O Shibolet, M Gomori, R Alper, B Thalenfeld, D Engelhardt, E Rabbani and Y Ilan 121

ACE inhibition has adverse renal effects during dietary sodium restriction in proteinuric and healthy rats I Hamming, G Navis, MJA Kocks and H van Goor 129

Announcements 140

Volume 209, Number 2 June 2006

Commentary

Brachyury and chordoma: the chondroid-chordoid dilemma resolved? S Romeo and PCW Hogendoorn 143

Review Article

Trypsin in colorectal cancer: molecular biological mechanisms of proliferation, invasion and metastasis K Soreide, EA Janssen, H Körner and JPA Baak 147

Original Papers

Brachyury, a crucial regulator of notochordal development, is a novel biomarker for chordomas S Vujovic, S Henderson, N Presneau, E Odell, T Jacques, R Tirabosco, C Boshoff and AM Flanagan 157

Expression and regulation of human β-defensin-2 in osteoarthritic cartilage D Varoga, FP Paulsen, S Kohrs, S Grohmann, S Lippross, R Mentlein, BN Tillmann, MB Goldring, L Besch and T Pufe 166

Peptidoglycan and peptidoglycan-specific Th1 cells in psoriatic skin lesions BS Baker, JD Laman, A Powles, L van der Fits, JSA Voerman, M-J Melief and L Fry 174

DC-SIGN association with the Th2 environment of lepromatous lesions: cause or effect? EJ Soilleux, EN Sarno, MO Hernandez, E Moseley, J Horsley, UG Lopes, MJ Goddard, SL Vowler, N Coleman, RJ Shattock and EP Sampaio 182

Altered bone morphogenetic protein signalling in the *Helicobacter pylori*- infected stomach SA Bleuming, LL Kodach, MJ Garcia Leon, DJ Richel, MP Peppelenbosch, PH Reitsma, JC Hardwick and GR van den Brink 190

Anti-inflammatory effect of augmented nitric oxide production in chronic lung infection N Hopkins, Y Gunning, DF O'Croinin, JG Laffey and P McLoughlin 198

Increased expression of high mobility group A proteins in lung cancer VK Sarhadi, H Wikman, K Salmenkivi, E Kuosma, T Sioris, J Salo, A Karjalainen, S Knuutila and S Anttila 206

Expression of drug pathway proteins is independent of tumour type W Zhang, WD Shannon, J Duncan, GL Scheffer, RJ Scheper and HL McLeod 213

Increased gene copy numbers at chromosome 20q are frequent in both squamous cell carcinomas and adenocarcinomas of the cervix SM Wilting, PJF Snijders, GA Meijer, B Ylstra, PRLA van den IJssel, AM Snijders, DG Albertson, J Coffa, JP Schouten, MA van de Wiel, CJLM Meijer and RDM Steenbergen 220

Cardiac myxoma cells exhibit embryonic endocardial stem cell features A Orlandi, A Ciucci, A Ferlosio, R Genta, LG Spagnoli and G Gabbiani 231

Murine M cells express annexin V specifically P Verbrugghe, W Waelput, B Dieriks, A Waeytens, J Vandesompele and CA Cuvelier 240

Immunoglobulin class-switch recombination occurs in mantle cell lymphomas W Klapper, M Szczepanowski, K Heidorn, M Müschen, S Liedtke, A Sotnikova, NS Andersen, J Greeve and R Parwaresch 250

A marginal zone phenotype in follicular lymphoma with t(14;18) is associated with secondary cytogenetic aberrations typical of marginal zone lymphoma EE Torlakovic, HV Aamot and S Heim 258

Bone marrow transplantation ameliorates pathology in interleukin-10 knockout colitic mice S Bamba, CY Lee, M Brittan, SL Preston, NC Direkze, R Poulsom, MR Alison, NA Wright and WR Otto 265

***PTEN* gene loss, but not mutation, in benign and malignant phaeochromocytomas** FH van Nederveen, A Perren, H Dannenberg, B-J Petri, WNM Dinjens, P Komminoth and RR de Krijger 274

Letters to the Editor

Re: Oda et al. Frequent alteration of *p16*^{INK4a}/*p14*^{ARF} and *p53* pathways in the round cell component of myxoid/round cell liposarcoma: *p53* gene alterations and reduced p14^{ARF} expression both correlate with poor prognosis. *J Pathol* 2005; 207: 410–421 F Perrone, E Tamborini, S Suardi, MS Lagonigro and S Pilotti 281

Author's reply: Response to Perrone, Tamborini, Suardi, Lagonigro and Pilotti Y Oda and M Tsuneyoshi 282

Announcements 283

Volume 209, Number 3 July 2006

Editorial

The Pathological Society Centenary CS Herrington and J Theobald 285

Review Article

Stem cells and cancer: an intimate relationship J Burkert, NA Wright and MR Alison 287

Original Papers

High-level expression, activation and subcellular localization of p38-MAP kinase in thyroid neoplasms M Pomérance, J Quillard, F Chantoux, J Young and J-P Blondeau 298

Quantitative analysis of allele imbalance supports atypical ductal hyperplasia lesions as direct breast cancer precursors PS Larson, A de las Morenas, SR Cerda, SR Bennett, LA Cupples and CL Rosenberg 307

Differential expression of glucocorticoid receptor in human breast tissues and related neoplasms H-C Lien, Y-S Lu, A-L Cheng, W-C Chang, Y-M Jeng, Y-H Kuo, C-S Huang, K-J Chang and Y-T Yao 317

Birt-Hogg Dubé gene mutations in human endometrial carcinomas with microsatellite instability H Fujii, W Jiang, T Matsumoto, K Miyai, K Sashara, N Ohtsuji and O Hino 328

Evidence for the early onset of aberrant promoter methylation in urothelial carcinoma D Dhawan, FC Hamdy, I Rehman, J Patterson, SS Cross, KM Feeley, Y Stephenson, M Meuth and JWF Catto 336

***Chlamydia psittaci* is variably associated with ocular adnexal MALT lymphoma in different geographical regions** E Chanudet, Y Zhou, CM Bacon, AC Wotherspoon, H-K Müller-Hermelink, P Adam, HY Dong, D de Jong, Y Li, R Wei, X Gong, Q Wu, R Ranaldi, G Goteri, S A Pileri, H Ye, RA Hamoudi, H Liu, J Radford and M-Q Du 344

Prognostic significance of PU.1 in follicular lymphoma EE Torlakovic, N Bilalovic, R Golouh, A Zidar and S Angel 352

Variable expression of Epstein-Barr virus-induced gene 3 during normal B-cell differentiation and among B-cell lymphomas F Larousserie, E Bardel, A Coulomb L'Herminé, D Canioni, N Brousse, RA Kastelein and O Devergne 360

Gastrointestinal stromal tumours overexpress fatty acid synthase S Rossi, W Ou, D Tang, N Bhattacharya, AP Dei Tos, JA Fletcher and M Loda 369

Therapeutic implications of the specific inhibition of causative matrix metalloproteinases in experimental colitis induced by dextran sulphate sodium K Kobayashi, Y Arimura, A Goto, S Okahara, T Endo, Y Shinomura and K Imai 376

Prednisolone promotes remission and gastric mucosal regeneration in experimental autoimmune gastritis M Biondo, J Field, B-H Toh and F Alderuccio 384

Expression of 5-lipoxygenase and cyclooxygenase pathway enzymes in nasal polyps of patients with aspirin-intolerant asthma J Adamjee, Y-J Suh, H-S Park, J-H Choi, JF Penrose, BK Lam, KF Austen, AM Cazaly, SJ Wilson and AP Sampson 392

Endomyocardial infiltration by B and NK cells foreshadows the recurrence of cardiac allograft rejection C Sorrentino, A Scarinci, T D'Antuono, M Piccirilli, M Di Nicola, M Pasquale, C Di Lorio and E Di Carlo 400

***EXT*-related pathways are not involved in the pathogenesis of dysplasia epiphysealis hemimelica and metachondromatosis** JVMG Bovée, L Hameetman, HM Kroon, T Aigner and PCW Hogendoorn 411

Letters to the Editor

Re: Jarrett. Viruses and lymphoma/leukaemia. *J Pathol* 2006; 208: 176–186 RA Vilchez 420

Author's reply: Response to Vilchez RF Jarrett 422

Announcements 425

Volume 209, Number 4 August 2006

Commentary

Epstein-Barr virus in breast cancer: artefact or aetiological agent? PG Murray 427

Original Papers

The antibody 2B4 directed against the Epstein-Barr virus (EBV)-encoded nuclear antigen 1 (EBNA1) detects MAGE-4: implications for studies on the EBV association of human cancers C Hennard, T Pfuhl, M Buettner, K-F Becker, T Knöfel, J Middeldorp, E Kremmer, G Niedobitek and F Grässer 430

MMTV-like sequences in human breast cancer: a fluorescent PCR/laser microdissection approach F Zammarchi, M Pistello, A Piersigilli, R Murr, C Di Cristofano, AG Naccarato and G Bevilacqua 436

***EGFR* amplification and lack of activating mutations in metaplastic breast carcinomas** JS Reis-Filho, C Pinheiro, MBK Lambros, F Milanezi, S Carvalho, K Savage, PT Simpson, C Jones, S Swift, A Mackay, RM Reis, JL Hornick, EM Pereira, F Baltazar, CDM Fletcher, A Ashworth, SR Lakhani and FC Schmitt 445

Jaw1/LRMP, a germinal centre-associated marker for the immunohistological study of B-cell lymphomas S Tedoldi, JC Paterson, J Cordell, S-Y Tan, M Jones, S Manek, AP Dei Tos, H Roberton, N Masir, Y Natkunam, SA Pileri, F Facchetti, M-L Hansmann, DY Mason and T Marafioti 454

Effusion and solid lymphomas have distinctive gene and protein expression profiles in an animal model of primary effusion lymphoma Y Yanagisawa, Y Sato, Y Asahi-Ozaki, E Ito, R Honma, J Imai, T Kanno, M Kano, H Akiyama, T Sata, F Shinkai-Ouchi, Y Yamakawa, S Watanabe and H Katano 464

Gene expression analysis of dendritic/Langerhans cells and Langerhans cell histiocytosis R Rust, J Kluiver, L Visser, G Harms, T Blokzijl, W Kamps, S Poppema and A van den Berg 474

Clusterin expression in follicular dendritic cells associated with prion protein accumulation K Sasaki, K Doh-ura, JW Ironside, N Mabbott and T Iwaki 484

Identification of a novel amplicon at distal 17q containing the *BIRC5/SURVIVIN* gene in malignant peripheral nerve sheath tumors CT Storlazzi, HR Brekke, N Mandahl, O Brosjö, S Smeland, RA Lothe and F Mertens 492

Peripheral chondrosarcoma progression is accompanied by decreased Indian Hedgehog signalling L Hameetman, LB Rozeman, M Lombaerts, J Oosting, AHM Taminiau, A-M Cleton-Jansen, JVMG Bovée and PCW Hogendoorn 501

Centrosome abnormalities are frequently observed in non-small-cell lung cancer and are associated with aneuploidy and cyclin E overexpression MK Koutsami, PK Tsantoulis, M Kouloukousa, K Apostolopoulou, IS Pateras, Z Spartinou, A Drougou, K Evangelou, C Kittas, J Bartkova, J Bartek and VG Gorgoulis 512

***PTOV1*: a novel testosterone-induced atherogenetic gene in human aorta** Y Nakamura, T Suzuki, K Igarashi, J Kanno, T Furukawa, C Tazawa, F Fujishima, I Miura, T Ando, N Moriyama, T Moriya, H Saito, S Yamada and H Sasano 522

Validation of 16S rDNA sequencing in microdissected bowel biopsies from Crohn's disease patients to assess bacterial flora diversity G De Hertogh, J Aerssens, R de Hoogt, P Peeters, P Verhasselt, P Van Eyken, N Ectors, S Vermeire, P Rutgeerts, B Coulie and K Geboes 532

The role of junctional adhesion molecule C (JAM-C) in acute pancreatitis A Vonlaufen, M Aurrand-Lions, C Pastor, C Lamagna, A Hadengue, BA Imhof and J-L Frossard 540

Stathmin overexpression cooperates with *p53* mutation and *osteopontin* overexpression, and is associated with tumour progression, early recurrence and poor prognosis, in hepatocellular carcinoma R-H Yuan, Y-M Jeng, H-L Chen, P-L Lai, H-W Pan, F-J Hsieh, C-Y Lin, P-H Lee and H-C Hsu 549

Journal of Pathology
J Pathol 2006; **209**: v–viii.

Keyword index

ACE inhibition, 129
activation-induced cytidine deaminase, 250
acute pancreatitis, 540
adenoma, 298
adoptive transfer, 121
afferent arterioles, 129
alimentary, 4
alpha smooth muscle actin, actin isoforms, 231
amplification, 492
androgen receptor, 522
aneuploidy, 512
animal model, 464
annexin V, 240
antibody, 427
antigen presentation, 174
antigen selection, 56
antimicrobial peptides, 166
AP-2γ, 25
apoptosis, 95
array CGH, 220
aspirin, 392
asthma, 392
astrocytes, 15
atypical ductal hyperplasia, 307
autoimmunity, 384

2B4, 430
B-cell differentiation, 360
B-cell lymphoma, 360
BAX, 328
benign, 274
BIRC5, 492
Birt–Hogg–Dubé, 328
bladder cancer, 106, 336
Bmi1, 287
bone marrow transplantation, 265
bone morphogenetic protein, 190
bone neoplasm, 143
bone tumours, 411
brachyury, 143, 157
breast cancer, 307, 430, 445
BSE, 1

C-KIT, 25
cancer stem cell, 287
cancer testis antigen, 427
carcinogenesis, 147, 287
carcinoma, 298
carcinoma *in situ*, 336
cardiac myxoma, 231
cardiac stem cells, 231
cardiac tumours, 231
cartilage, 166
cartilaginous tumours, 501
cathepsin H, 240
CD1a, 474
CD27, 56
CD34, 231
cell cycle, 106
cell proliferation, 522
central nervous system, 25
centrosome, 512
cervical cancer, 220
chemotherapy, 213
chondrocytes, 411
chondrosarcoma, 143, 157
Chlamydia psittaci, 344
chordoma, 143, 157
chromogenic *in situ* hybridization, 445
chronic gastritis, 88
class-switch, 250
clonogenicity, 287
clusterin, 240, 484
colonic subepithelial myofibroblasts, 265
colorectal cancer, 95, 147
Crohn's disease, 532
cyclin D1, 106
cyclin D3, 106
cyclin E, 512
cyclooxygenase, 392
cytogenetics, 258
cytokine, 166, 360, 400

DAP-kinase, 95
DC-SIGN, 182
defensins, 166
detergent autoclaving pretreatment, 484
development, 143
DNA microarray, 464
DNA sequence analysis, 532
DNMT3B, 220
DSS colitis, 376
dysplasia, 287

E2F1, 512
EBNA1, 427, 430
EBV, 430
electron microscopy, 400
endometrial cancer, 328
endothelial-like, 67
Epstein–Barr virus, 427
experimental autoimmune gastritis, 384
expression, 15

FAE, 240
fatty acid synthase, 369
FISH, 492
fluorescent PCR, 436
follicular dendritic cell, 484
follicular lymphoma, 258, 352
FSCN1, 474

gastric cancer, 88
gastric regeneration, 384
gastrointestinal stromal tumour, 369
gene expression, 411
gene mutation, 445
gene regulation, 166
germ cell tumours, 25
germinal centre phenotype, 352
germinal centres, 454
germinoma, 25
glioblastoma, 15, 34
glucocorticoid receptor, 317
Gram-positive bacteria, 174
growth factors, 411
GSN, 474

haemangioblastoma, 34
haematopoietic stem cell (HSC), 287
Hedgehog, 501
Hedgehog signalling, 287
Helicobacter pylori, *babA2* gene, 88
Helicobacter pylori, 190
hepatocellular carcinoma, 549
hierarchical clustering, 78
HMGA1, 206
HMGA2, 206
HMTV, 436
HOX, 15
HPV, 220
human breast cancer, 436
human t(8;14)(q32;q24) translocation, 44

immune deficiency, 484
immunoglobulin, 250
immunohistochemistry, 88, 206, 213, 298, 400, 427, 445, 484
immunophenotype, 78
infection, 198
inflammation, 166
inflammatory bowel disease, 265
inflammatory infiltrate, 540
ingestion, 1
interleukin-10 knockout mice, 265
interleukin-27, 360
interstitial damage, 129
intestinal metaplasia, 88
intestine, 4
intracranial, 25
invasion, 147
irinotecan, 213
IRTA1, 56

Jagged, 287
JAM-C, 540
Jaw1/LRMP, 454

Kaposi's sarcoma-associated herpesvirus, 464
kidney, 129

Langerhans cell histiocytosis, 474
Langerhans cells, 474
leprosy, 182
leptin, 121
leukocytes, 400
leukotriene, 392
Lewis antigen, 88
Lewis precursor antigen, 88
5-lipoxygenase, 392
LOH, 274
9p21 loss of heterozygosity, 106
loss of heterozygosity, 307
low sodium, 129
LTC_4 synthase, 392
luminal epithelial cells, 317
lung, 198
lung cancer, 206
lymphangiogenesis, 67
lymphoma, 454
LYVE-1, 67

M cell, 240
M. leprae, 182
macrophage, 67, 95, 182
MAGE-4, 427, 430
malignant, 274
ManLAM, 182
mantle cell lymphoma, 250
marginal zone phenotype, 258
matrix metalloproteinases, 147, 376
metaplasia, 287
metaplastic carcinoma of the breast, 317
metastasis, 147
methylation, 336
microarray, 240, 445
microdissection, 436, 532
microsatellite instability, 328
MLPA, 220
MMP12, 474
MMTV, 436
molecular pathways, 501
monocytoid B cells, 56
morphogen, 190
mouse models of human plasma cell neoplasms, 44
mouse T(12;15)(*Igh-Myc*) translocation, 44
MPNST, 492
mucinous bronchioloalveolar carcinoma, 78
mutation, 328
mutation analysis, 274
Myc, 44
myoepithelial cells, 317
myofibroblast, 287

NANOG, 25
nasal polyposis, 392
neonatal thymectomy, 384
NF1, 492
nitric oxide, 198
NKT lymphocytes, 121
non-alcoholic steatohepatitis (NASH), 121
non-germinoma, 25
non-small-cell lung cancer, 512
non-steroidal anti-inflammatory drugs, 392
NOS, 198
Notch, 287
notochord, 143, 157
nucleus pulposus, 157

OCT-4, 25
ocular adnexal MALT lymphoma, 344
osteoarthritis, 166
osteoclast, 114
osteopontin, 549

p53 mutation, 549
p38-MAPK pathway, 298
Paget's disease, 114
parachordoma, 157
pathogenesis, 4

Copyright © 2006 Pathological Society of Great Britain and Ireland. Published by John Wiley & Sons, Ltd.

phaeochromocytoma, 274
phenotypic heterogeneity, 231
polymerase chain reaction, 532
precursor, 307
prednisolone, 384
premalignant, 307
primary effusion lymphoma, 464
primary human brain tumour, 34
prion, 1, 4, 484
prognosis, 549
progression, 106
proliferation, 147, 369
promoter methylation, 95
prostaglandin, 392
protease-activated receptor, 147
proteomics, 464
Pseudomonas aeruginosa, 198
psoriasis, 174
PTEN, 274
PTHLH and PTHR1, 411
PTOV1, 522
PU.1, 352
pulmonary hypertension, 198

3q, 220
20q, 220
quantitative stereology, 198

16S ribosomal RNA, 532
recurrent aberrations, 258

SAGE, 474
sarcoma, 114
scrapie, 1, 4
self-renewal, 287
sheep, 1
side population (SP), 287
signet-ring cell carcinoma, 78
siRNA, 369, 376
skin inflammation, 174
solid adenocarcinoma with mucin production, 78
stabilin-1, 67
stathmin, 549
stem cell, 287
stromelysins, 376
survival, 206, 352

T cell cytokines, 174
target gene, 328
testosterone, 522
thymus, 384
thyroid, 298
tissue microarray, 78, 206, 213, 369
toxoplasmic lymphadenitis, 56
transforming growth factor-β, 501
transgenic mice, 540
transplantation, 400
trypsin, 147
TSE, 1
TSPY, 25
tumour progression, 307, 501
tumour size, 106

vascular endothelial growth factor (VEGF)-C, 34
vascular smooth muscle cells, 522
vCJD, 1
VEGF-D, 34
VEGFR-3, 34

Wnt signalling, 287

Author index

Aamot, HV, 258
Abdel-Fattah, R, 15
Adam, P, 344
Adamjee, J, 392
Aerssens, J, 532
Aigner, T, 411
Akiyama, H, 464
Albertson, DG, 220
Alderuccio, F, 384
Alison, MR, 265, 287
Alper, R, 121
Alvarez-Kindelan, J, 106
Amato, T, 56
Andersen, NS, 250
Ando, T, 522
Angel, S, 352
Anttila, S, 206
Apostolopoulou, K, 512
Arimura, Y, 376
Arnold, B, 67
Asahi-Ozaki, Y, 464
Ashworth, A, 445
Athanasou, NA, 114
Aurrand-Lions, M, 540
Austen, KF, 392

Baak, JPA, 147
Bacon, CM, 344
Baetens, D, 34
Baker, BS, 174
Baltazar, F, 445
Bamba, S, 265
Bardel, E, 360
Bartek, J, 512
Bartkova, J, 512
Becker, K-F, 430
Bellan, C, 56
Bennett, SR, 307
Besch, L, 166
Bevilacqua, G, 436
Bhattacharya, N, 369
Bilalovic, N, 352
Biondo, M, 384
Blanca, AM, 106
Bleuming, SA, 190
Blokzijl, T, 474
Blondeau, J-P, 298
Boltze, C, 95
Bomgardner, D, 15
Boshoff, C, 157
Bovée, JVMG, 411, 501
Brekke, HR, 492
Brittan, M, 265
Brosjö, O, 492
Brousse, N, 360
Buettner, M, 430
Burkert, J, 287
Burkhardt, K, 34

Canioni, D, 360
Carvalho, S, 445
Catto, JWF, 336
Cazaly, AM, 392
Cerda, SR, 307
Chang, K-J, 317
Chang, W-C, 317
Chantoux, F, 298
Chanudet, E, 344
Chaplin, M, 4
Chen, H-L, 549
Cheng, A-L, 317
Choe, G, 88
Choi, J-H, 392
Ciucci, A, 231
Cleton-Jansen, A-M, 501
Coffa, J, 220
Coleman, N, 182
Cordell, J, 454
Coulie, B, 532
Coulomb L'Herminé, A, 360
Cristofano, CD, 436
Cross, SS, 336
Cupples, LA, 307
Cuvelier, CA, 240

D'Antuono, T, 400
Dannenberg, H, 274
Davis, L, 4
De Hertogh, G, 532
de Hoogt, R, 532
de Jong, D, 344
de Krijger, RR, 274
de las Morenas, A, 307
De Tribolet, N, 34
Dei Tos, AP, 369, 454
Demory, A, 67
Devergne, O, 360
Dhawan, D, 336
Di Carlo, E, 400
Di Iorio, C, 400
Di Nicola, M, 400
Dieriks, B, 240
Dietrich, P-Y, 34
Dinjens, WNM, 274
Direkze, NC, 265
Doh-ura, K, 484
Dong, HY, 344
Drougou, A, 512
Du, M-Q, 344
Duncan, J, 213

Eaton, S, 4
Ectors, N, 532
Elinav, E, 121
Endo, T, 376
Engelhardt, D, 121
Espenes, A, 4
Evangelou, K, 512

Facchetti, F, 454
Falini, B, 56
Falkowska-Hansen, B, 67
Falkowski, M, 67
Feeley, KM, 336
Ferlosio, A, 231
Field, J, 384
Flanagan, AM, 157
Fletcher, CDM, 445
Fletcher, JA, 369
Frossard, J-L, 540
Fry, L, 174
Fujii, H, 328
Fujishima, F, 522
Furukawa, T, 522

Gabbiani, G, 231
Ganss, R, 67
Garcia Leon, MJ, 190
Geboes, K, 532
Geginat, G, 67
Genta, R, 231
Goddard, MJ, 182
Goerdt, S, 67
Goldring, MB, 166
Golouh, R, 352
Gomori, M, 121
Gong, X, 344
González, L, 4
Gorgoulis, VG, 512
Goteri, G, 344
Goto, A, 376
Grässer, FA, 430
Greeve, J, 250
Grohmann, S, 166
Gunning, Y, 198

Habold, C, 95
Hadengue, A, 540
Hamdy, FC, 336
Hameetman, L, 411, 501
Hamming, I, 129
Hamoudi, RA, 344
Han, SS, 44
Hansmann, M-L, 454
Hardwick, JC, 190
Harms, G, 474
Harrison, JA, 34
Hartig, R, 95
Heidorn, K, 250
Heim, S, 258
Henderson, S, 157
Hennard, C, 430
Hernandez, MO, 182
Herrington, CS, 285
Hino, O, 328
Hintze, C, 95
Hoei-Hansen, CE, 25
Hogendoorn, PCW, 143, 411, 501
Honma, R, 464
Hopkins, N, 198
Hornick, JL, 445
Horsley, J, 182
Hsieh, F-J, 549
Hsu, H-C, 549
Huang, C-S, 317
Hussaini, IM, 15

Igarashi, K, 522
Ilan, Y, 121

Copyright © 2006 Pathological Society of Great Britain and Ireland. Published by John Wiley & Sons, Ltd.

Imai, J, 464
Imai, K, 376
Imhof, BA, 540
Ironside, JW, 484
Ishii, G, 78
Ito, E, 464
Itonaga, I, 114
Iwaki, T, 484

Jacques, TS, 157
Janssen, EA, 147
Janz, S, 44
Jarrett, RF, 422
Jeffrey, M, 4
Jeng, Y-M, 317, 549
Jenny, B, 34
Jiang, W, 328
Jones, C, 445
Jones, M, 454
Juhler, M, 25

Kamps, W, 474
Kanno, J, 522
Kanno, T, 464
Kano, M, 464
Karjalainen, A, 206
Kastelein, RA, 360
Katano, H, 464
Kim, HH, 88
Kim, JS, 44
Kim, WH, 88
Kiss, JZ, 34
Kittas, C, 512
Klapper, W, 250
Kluiver, J, 474
Knöfel, T, 430
Knuutila, S, 206
Kobayashi, K, 376
Kocks, MJA, 129
Kodach, LL, 190
Kodama, T, 78
Kohrs, S, 166
Komminoth, P, 274
Körner, H, 147
Kouloukoussa, M, 512
Koutsami, MK, 512
Kremmer, E, 430
Kroon, HM, 411
Krueger, S, 95
Kuester, D, 95
Kuo, Y-H, 317
Kuosma, E, 206
Kurzen, H, 67
Kzhyshkowska, J, 67

Laffey, JG, 198
Lagonigro, MS, 281
Lai, P-L, 549
Lakhani, SR, 445
Lam, BK, 392
Lamagna, C, 540
Laman, JD, 174
Lambros, MBK, 445
Landsverk, T, 4
Larousserie, F, 360
Larson, PS, 307
Lau, Y-FC, 25
Lau, YS, 114
Laursen, H, 25
Lazzi, S, 56
Lee, C-Y, 265
Lee, HS, 88
Lee, P-H, 549
Leoncini, L, 56
Li, Y, 344
Liedtke, S, 250
Lien, H-C, 317
Lin, C-Y, 549
Lippross, S, 166
Liu, H, 344
Loda, M, 369
Lombaerts, M, 501
Lopes, M-BS, 15
Lopes, UG, 182
Lopez-Beltran, A, 106
Lothe, RA, 492
Lu, Y-S, 317
Luque, RJ, 106

Mabbott, N, 484
MacAldowie, C, 4
Mackay, A, 445
Mandahl, N, 492
Manek, S, 454
Marafioti, T, 454
Margalit, M, 121
Martin, S, 4
Masir, N, 454
Mason, DY, 454
Matsumoto, T, 328
McGovern, G, 4
McLeod, HL, 213
McLoughlin, P, 198
McNeil, N, 44
Meijer, CJLM, 220
Meijer, GA, 220
Melief, M-J, 174
Mentlein, R, 166
Mertens, F, 492
Metharom, P, 67
Meuth, M, 336
Meyer, F, 95
Middeldorp, J, 430
Milanezi, F, 445
Mittag, F, 95
Miura, I, 522
Miyai, K, 328
Moldenhauer, G, 67
Montironi, R, 106
Moriya, T, 522
Moriyama, N, 522
Moseley, E, 182
Mottaz, H, 34
Müller-Hermelink, H-K, 344
Murata, Y, 78
Murr, R, 436
Murray, PG, 427
Müschen, M, 250

Naccarato, AG, 436
Nagai, K, 78
Nakamura, Y, 522
Natkunam, Y, 454
Navis, G, 129
Nitadori, J, 78

O'Croinin, DF, 198
Ochiai, A, 78
Oda, Y, 282
Odell, E, 157
Oggioni, M, 56
Ohtsuji, N, 328
Okahara, S, 376
Oosting, J, 501
Orlandi, A, 231
Otto, WR, 265
Ou, W, 369

Palummo, N, 56
Pan, H-W, 549
Pappo, O, 121
Park, H-S, 392
Park, KU, 88
Park, SS, 44
Parwaresch, R, 250
Pasquale, M, 400
Pastor, CM, 540
Pateras, IS, 512
Paterson, JC, 454
Patterson, J, 336
Paulsen, FP, 166
Pease, C-S, 15
Peeters, P, 532
Penrose, JF, 392
Peppelenbosch, MP, 190
Pepper, MS, 34
Pereira, EM, 445
Perren, A, 274
Perrone, F, 281
Peters, B, 95
Petri, B-J, 274
Pfuhl, T, 430
Piccirilli, M, 400
Piersigilli, A, 436
Pileri, SA, 344, 454
Pilotti, S, 281
Pinheiro, C, 445
Pizzolato, GP, 34
Pomérance, M, 298
Poppema, S, 474
Poulsom, R, 265
Powles, A, 174
Presneau, N, 157
Press, CMcL, 4
Preston, SL, 265
Pufe, T, 166

Quillard, J, 298
Quintero, A, 106

Rabbani, E, 121
Radford, J, 344
Rajpert-de Meyts, E, 25
Ranaldi, R, 344
Rehman, I, 336
Reis, RM, 445
Reis-Filho, JS, 445
Reitsma, PH, 190
Requena, MJ, 106
Richel, DJ, 190
Roberton, H, 454
Rodriguez, ME, 106
Roessner, A, 95
Romeo, S, 143
Rosenberg, CL, 307
Rossi, S, 369
Rozeman, LB, 501
Rust, R, 474
Rutgeerts, P, 532

Sabokbar, A, 114
Saito, H, 522
Sales, N, 1
Salmenkivi, K, 206
Salo, J, 206
Sampaio, EP, 182
Sampson, AP, 392
Sarhadi, VK, 206
Sarno, EN, 182
Sasaki, K, 484
Sasano, H, 522
Sashara, K, 328
Sata, T, 464
Sato, Y, 464
Savage, K, 445
Scarinci, A, 400
Scheffer, GL, 213
Scheper, RJ, 213
Schledzewski, K, 67
Schmitt, FC, 445
Schneider-Stock, R, 95
Schouten, JP, 220
Schuerfeld, K, 56
Sehested, A, 25
Shannon, WD, 213
Shattock, RJ, 182
Shibolet, O, 121
Shinkai-Ouchi, F, 464
Shinomura, Y, 376
Siendones, E, 106
Simpson, PT, 445
Sioris, T, 206
Skakkebaek, NE, 25
Sklair-Levy, M, 121
Smeland, S, 492
Snijders, AM, 220
Snijders, PJF, 220
Soilleux, EJ, 182
Song, J, 88
Soreide, K, 147
Sorrentino, C, 400
Sotnikova, A, 250
Spagnoli, LG, 231
Spartinou, Z, 512
Steenbergen, RDM, 220
Stephenson, Y, 336
Storlazzi, CT, 492
Suardi, S, 281
Suh, Y-J, 392
Sun, SG, 114
Suzuki, T, 522
Swift, S, 445
Szczepanowski, M, 250

Tamborini, E, 281
Taminiau, AHM, 501
Tan, S-Y, 454
Tang, D, 369
Tazawa, C, 522
Tedoldi, S, 454
Thalenfeld, B, 121
Theobald, J, 285
Tiacci, E, 56
Tille, J-C, 34
Tillmann, BN, 166
Tirabosco, R, 157
Toh, B-H, 384
Tonini, T, 56
Torlakovic, EE, 258, 352
Tosi, P, 56
Tsantoulis, PK, 512
Tsuneyoshi, M, 282
Tsuta, K, 78

Ugurel, S, 67
Ullrich, O, 95

van de Wiel, MA, 220
van den Berg, A, 474
van den Brink, GR, 190
van den IJssel, PRLA, 220
van der Fits, L, 174
Van Eyken, P, 532
van Goor, H, 129
van Nederveen, FH, 274
Vandesompele, J, 240
Varoga, D, 166
Vatti, R, 56
Verbrugghe, P, 240
Verhasselt, P, 532
Vermeire, S, 532
Vilchez, RA, 420
Visser, L, 474

Copyright © 2006 Pathological Society of Great Britain and Ireland. Published by John Wiley & Sons, Ltd.

Voerman, JSA, 174
Vonlaufen, A, 540
Vowler, SL, 182
Vujovic, S, 157

Waelput, W, 240
Waeytens, A, 240
Watanabe, S, 464
Wei, R, 344
Wikman, H, 206
Wilson, SJ, 392
Wilting, SM, 220
Wotherspoon, AC, 344
Wright, NA, 265, 287
Wu, Q, 344

Xiao, A, 15

Yamada, S, 522
Yamakawa, Y, 464
Yanagisawa, Y, 464
Yao, Y-T, 317
Ye, H, 344
Ylstra, B, 220
Young, J, 298
Yuan, R-H, 549

Zammarchi, F, 436
Zhang, W, 213
Zhou, Y, 344
Zidar, A, 352

Copyright © 2006 Pathological Society of Great Britain and Ireland. Published by John Wiley & Sons, Ltd.